What is claimed is:

1. A method for a PHY to resolve link frame collisions, the method comprising:

(i) attempting to transmit a link frame if the PHY has not transmitted a frame in the last x seconds, where x is a positive real number; and

(ii) if a frame collision is detected during step (i), attempting to transmit a link frame at a time interval after the last frame transmission attempt of the PHY has ended.

2. The method as set forth in claim 1, further comprising:

(iii) repeating claim limitation (ii) each time a frame collision is detected until the number of link frame transmission attempts since the occurrence of claim limitation (i) equals a specified limit.

3. The method as set forth in claim 2, further comprising:

(iv) if in performing claim limitation (iii) the number of link frame transmission attempts since the occurrence of claim limitation (i) equals the specified limit, performing claim limitations (i) and (ii) upon allowing a random interval of time to elapse after the last link frame transmission attempt of the PHY has ended.

4. The method as set forth in claim 1, wherein the time interval is an Inter Packet Gap (IPG).

5. The method as set forth in claim 4, further comprising:

(iii) repeating claim limitation (ii) each time a frame collision is detected until the number of link frame transmission attempts since the occurrence of claim limitation (i) equals a specified limit.

6. The method as set forth in claim 5, further comprising:

(iv) if in performing claim limitation (iii) the number of link frame transmission attempts since the occurrence of claim limitation (i) equals the specified limit, performing claim limitations (i) and (ii) upon allowing a random interval of time to elapse after the last link frame transmission attempt of the PHY has ended.

7. A PHY comprising:

a transceiver to transmit and receive frames on a network; and

a finite state machine; wherein

while the finite state machine is in a first state, the PHY monitors frame transmissions by the transceiver; and

while the finite state machine is in a second state, the PHY attempts link frame transmissions such that each link frame transmission is attempted at a time interval after the last frame transmission attempt has ended.

8. The PHY as set forth in claim 7, wherein

while the finite state machine is in a third state, the PHY does not transmit any link frames, wherein the finite state machine transitions from the third state to the first state after a random time interval upon entering the third state;

the finite state machine transitions from the first state to the second state if there has been no frame transmission for a time period;

the finite state machine causes the transceiver to attempt to transmit a link frame when transitioning from the first state to the second state; and

the finite state machine transitions from the second state to the first state if no frame collision is detected since the last frame transmission attempt.

9. The PHY as set forth in claim 8, wherein

the finite state machine transitions from the second state to the third state if the number of link frame transmissions since entering the second state is equal to a specified limit.

10. The PHY as set forth in claim 9, wherein

while the finite state machine is in the first state and the third state, a PHY-to-MAC transmit-clock signal is enabled; and

while the finite state machine is in the second state, the PHY-to-MAC transmit-clock signal is disabled.

11. The PHY as set forth in claim 7, wherein the time interval is an Inter Packet Gap (IPG).

12. The PHY as set forth in claim 11, wherein

while the finite state machine is in a third state, the PHY does not transmit any link frames, wherein the finite state machine transitions from the third state to the first state after a random time interval upon entering the third state;

the finite state machine transitions from the first state to the second state if there has been no frame transmission for a time period;

the finite state machine causes the transceiver to attempt to transmit a link frame when transitioning from the first state to the second state; and

the finite state machine transitions from the second state to the first state if no frame collision is detected since the last frame transmission attempt.

13. The PHY as set forth in claim 12, wherein

the finite state machine transitions from the second state to the third state if the number of link frame transmissions since entering the second state is equal to a specified limit.

14. The PHY as set forth in claim 13, wherein

while the finite state machine is in the first state and the third state, a PHY-to-MAC transmit-clock signal is enabled; and

while the finite state machine is in the second state, the PHY-to-MAC transmit-clock signal is disabled.

15. A PHY comprising:

a transceiver to attempt to transmit a first link frame if the PHY has not transmitted a frame for a time period; and

a collision detector, wherein if a first collision is detected by the collision detector during the attempt to transmit the first link frame, the PHY attempts to transmit a second link frame a time interval equal to an Inter Packet Gap (IPG) after transmission of the first link frame.

16. The PHY as set forth in claim 15, further comprising:

a counter, wherein the counter is changed by an increment if the collision detector detects a second collision when the PHY attempts to transmit the second link frame.

17. The PHY as set forth in claim 16, further comprising:

a free-running counter; and

an oscillator to clock the free-running counter, wherein the free-running counter provides a random number so that if the counter is equal to a specified limit when another frame collision is detected, a random time interval is allowed to elapse before another link frame is attempted to be transmitted.

18. A communication system comprising:

a network comprising a home phone line; and

a PHY coupled to the network to transmit and receive frames, the PHY comprising:

a transceiver to attempt to transmit a first link frame if the PHY has not transmitted a frame for a time period; and

a collision detector, wherein if a first collision is detected by the collision detector during the attempt to transmit the first link frame, the PHY attempts to transmit a second link frame a time interval equal to an Inter Packet Gap (IPG) after transmission of the first link frame.

19. The communication system as set forth in claim 18, wherein the PHY further comprises:

a counter, wherein the counter is changed by an increment if the collision detector detects a second collision when the PHY attempts to transmit the second link frame.

20. The communication system as set forth in claim 19, wherein the PHY further comprises:

a free-running counter; and

an oscillator to clock the free-running counter, wherein the free-running counter provides a random number so that if the counter is equal to a specified limit when another frame collision is detected, a random time interval is allowed to elapse before another link frame is attempted to be transmitted.